IN THE CLAIMS

Please amend the claims as follows:

- (Currently Amended) An apparatus, comprising:
- a unitary layer of electrically non-conductive material having a first surface adjacent a heat sink, a second surface adjacent a heat source, and a plurality of <u>unfilled</u> openings communicatively coupled between the first surface and the second surface, wherein a combined area <u>of</u> the plurality of <u>unfilled</u> openings comprises a selected percentage of the first surface.
- (Currently Amended) The apparatus of claim 1, wherein selected ones of the plurality of unfilled openings comprise a regular geometric shape.
- (Original) The apparatus of claim 2, wherein the regular geometric shape is substantially circular.
- (Original) The apparatus of claim 2, wherein the regular geometric shape is substantially square.
- (Currently Amended) The apparatus of claim 1, wherein selected ones of the plurality of unfilled openings comprise an irregular geometric shape.
- (Currently Amended) The apparatus of claim 1, wherein the combined area of the plurality of <u>unfilled</u> openings comprises at least about 90% of the first surface.
- (Currently Amended) The apparatus of claim 1, wherein the combined area of the plurality of <u>unfilled</u> openings comprises no more than about 95% of the first surface.

AMENDMENT AND RESPONSE UNDER 37 CFR § 1.113

Serial Number: 10/607,733 Filing Date: June 26, 2003

Tide: THERMAL INTERFACE APPARATUS, SYSTEMS, AND METHODS

- 8. (Currently Amended) The apparatus of claim 1, wherein the combined area of the phurality of <u>unfilled</u> openings comprises a selected percentage of the first surface and the second surface, <u>and</u> wherein the selected percentage of the second surface is different from the selected percentage of the first surface.
- (Original) The apparatus of claim 1, wherein the unitary layer of electrically nonconductive material comprises:
 - a polymer.
- (Original) The apparatus of claim 1, further comprising:
 a thermal interface material located between the unitary layer of electrically non-

conductive material and the heat sink.

- 11. (Original) The apparatus of claim 1, wherein the unitary layer of electrically nonconductive material comprises:
 - a non-woven material.
- 12. (Original) The apparatus of claim 1, wherein the unitary layer of electrically nonconductive material comprises:
 - a plurality of glass beads.
- (Canceled)
- 14. (Currently Amended) An apparatus, comprising:
 - a heat source;
 - a heat sink; and
- a unitary layer of electrically non-conductive material having a first surface adjacent the heat sink, a second surface adjacent the heat source, and a plurality of <u>unfilled</u> openings communicatively coupled between the first surface and the second surface, wherein a

combined area of the plurality of openings comprises a selected percentage of the first surface.

- 15. (Original) The apparatus of claim 14, wherein the unitary layer of electrically non-conductive material comprises:
 - a polymer.
- 16. (Original) The apparatus of claim 14, wherein the unitary layer of electrically nonconductive material has a substantially uniform thickness of about 0.05 mm.
- 17. (Original) The apparatus of claim 14, further comprising: a thermal interface material located between the unitary layer of electrically non-conductive material and the heat source.
- 18. (Original) The apparatus of claim 14, wherein the heat source comprises an integrated circuit package including a transponder.
- 19. (Original) The apparatus of claim 14, wherein the heat source comprises a die.
- (Original) The apparatus of claim 14, wherein the heat sink comprises a heat spreader.
- 21. (Currently Amended) The apparatus of claim 14, wherein the combined area of the plurality of <u>unfilled</u> openings comprises no more than about 90% of the first surface.
- 22. (Currently Amended) The apparatus of claim 14, wherein the combined area of the plurality of <u>unfilled</u> openings comprises no more than about 95% of the first surface.
- 23. (Withdrawn) A system, comprising:
 - a wireless transceiver;
 - a die including a die surface and a circuit electrically coupled to the wireless transceiver;

a heat sink; and

a unitary layer of electrically non-conductive material having a first surface adjacent the heat sink, a second surface adjacent the die surface, and a plurality of openings communicatively coupled between the first surface and the second surface, wherein a combined area of the plurality of openings comprises a selected percentage of the first surface.

- 24. (Withdrawn) The system of claim 23, wherein the wireless transceiver comprises: a transponder.
- 25. (Withdrawn) The system of claim 23, wherein the unitary layer of electrically non-conductive material comprises:

a polymer.

26. (Withdrawn) A method, comprising:

coupling a heat sink to a first surface of a unitary layer of electrically non-conductive material; and

coupling a heat source to a second surface of the unitary layer of electrically nonconductive material, wherein the unitary layer of electrically non-conductive material has a
plurality of openings communicatively coupled between the first surface and the second
surface, and wherein a combined area of the plurality of openings comprises a selected
percentage of the first surface.

27. (Canceled)

28. (Withdrawn) The method of claim 26, further comprising: compressing the unitary layer of electrically non-conductive material between the heat sink and the heat source. AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111

Serial Number: 10/667,733 Filing Date: June 26, 2003

THE THERMAL INTERFACE APPARATUS, SYSTEMS, AND METHODS

29. (Withdrawn) The method of claim 26, wherein the unitary layer of electrically non-conductive material comprises:a polymer.

30. (Withdrawn) The method of claim 26, further comprising: coupling a wireless transceiver to a circuit included in the die.